

Doc Code: AP.PRE.REQ



PTO/SB/33 (07-05)

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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional)	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]  on _____  Signature _____  Typed or printed name _____ Claudio FILIPPONE	Application Number  10/806,480	Filed  March 23, 2004	
	First Named Inventor  Claudio FILIPPONE		
	Art Unit  3748	Examiner  H. Nguyen	
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input checked="" type="checkbox"/> applicant/inventor.</p> <p>assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.</p> <p>attorney or agent of record. Registration number _____</p> <p>attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>			
<p><input checked="" type="checkbox"/> *Total of <u>1</u> form is submitted.</p>			

Signature

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Typed or printed name

240-899-9292

Telephone number

MAY 4th 2007

May 4, 2007  
Date

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of: )  
)  
**Claudio FILIPPONE** ) Group Art Unit: 3748  
)  
Serial No.: 10/806,480 ) Examiner: H. Nguyen  
)  
Filed: March 23, 2004 )  
)  
For: **MINIATURIZED WASTE HEAT** ) Confirmation No.: 1700  
**ENGINE** )

**Mail Stop Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

In conjunction with a Notice of Appeal under 37 C.F.R. § 41.31 and completed Form PTO/SB/33 filed concurrently herewith, Applicant respectfully requests a pre-appeal brief review of this application.

Claims 38-61 are pending in this application, with claims 38, 51, and 54 being independent.

In the final Office Action mailed February 6, 2007, claims 51-53 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,590,766 to Striebich ("Striebich"), and claims 38-50 and 54-58 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Striebich in view of U.S. Patent No. 5,327,987 to Abdelmalek ("Abdelmalek"). In addition, claims 37-61 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims of U.S. Patent No. 6,374,613 ("Patent I") or U.S. Patent No. 6,729,137 ("Patent II"). For at least the reasons that follow, these rejections should be withdrawn.

**35 U.S.C. § 102(b) Rejection Based on Striebich**

Striebich discloses a drive unit 1 comprising an internal combustion engine 2 and a waste heat turbine unit 3. The waste heat turbine unit 3 utilizes the energy contents of the exhaust gases from the internal combustion engine 2 to generate power. The power generated in the waste heat turbine unit 3 is

supplied to the crankshaft 8 of the internal combustion 2 through a bearing shaft and gearing mechanisms 9, 10.

The Examiner asserts that the bearing shaft 54' allegedly corresponds to the recited "drive shaft." The bearing shaft 54', however, is not "mechanically coupled to an electrical converter," as recited in claim 51. In fact, Striebich does not even disclose an electrical converter.

Nevertheless, the Examiner appears to allege that, since the bearing shaft 54' is connected to the crankshaft 8 of the internal combustion engine 2 and "[i]t's universally known that this [crankshaft 8] is connected to an electric alternator," Striebich inherently teaches the claimed subject matter. Applicant respectfully disagree.

For a proper inherency-based rejection, the Examiner must provide a factual basis and/or technical reasoning to reasonably support his determination that the missing feature is necessarily present in the subject matter described in the reference. In general, mere probabilities or possibilities that certain subject matter may result from a given set of circumstances is not sufficient to establish inherency.

In this case, the Examiner has not provided any factual basis and/or technical reasoning as to why the internal combustion of Striebich necessitates a mechanical coupling to an electric alternator. While a power system for an automobile may have an electric alternator, as alleged by the Examiner, not all internal combustion engines have an electric alternator. For example, an internal combustion engine of a lawn mower or a diesel pump usually does not have an electric alternator. As Striebich does not limit its disclosed engine to an automobile application (see, e.g., col. 2, lines 45-49), it would be a clear error to assume that the internal combustion engine of Striebich is an automobile engine and necessarily has an electric alternator. Moreover, where Striebich does not even disclose an electric alternator, it would be another clear error to assume that an electric alternator is "mechanically" coupled to the engine of Striebich.

In summary, the reasoning set forth by the Examiner is, at best, a mere speculation that an internal combustion engine usually connects or could connect to an electric alternator. That cannot be a proper basis for an inherency-based rejection under 35 U.S.C. § 102. Mechanically coupling an electric

alternator to an internal combustion engine may be known in the art, as alleged by the Examiner, and may be even obvious. However, this is not a valid rejection ground under 35 U.S.C. § 102.

For at least these reasons, Striebich does not anticipate claim 51. Striebich also does not anticipate claims 52 and 53 for the same reason that it does not anticipate claim 51. Thus, the 35 U.S.C. § 102(b) rejection is in error and should be withdrawn.

**35 U.S.C. § 103(a) Rejection Based on Striebich and Abdelmalek**

Independent claim 38 is directed to an auxiliary power unit configured to be coupled to a torque bearing element of a primary power unit. The power unit comprises an expander wheel comprising a drive shaft and a plurality of blades, an injection nozzle for injecting a condensable fluid towards the plurality of blades, and a clutch system configured to selectively couple the drive shaft to the torque bearing element. The power unit also comprises a control system configured to control the clutch system to selectively couple the drive shaft to the torque bearing element.

Independent claim 54 is directed to a method of providing auxiliary power to a primary power unit. The method comprises injecting a condensable fluid towards a plurality of blades of an expander wheel to rotate a drive shaft of the expander wheel and selectively coupling the drive shaft to a torque bearing element of the primary power unit. The method further comprises controlling the selective coupling of the drive shaft and the torque bearing element with a control system.

In the rejection, the Examiner acknowledges that “Striebich ... does not disclose a control unit for controlling the engagement of the clutch in response to the speeds of the auxiliary unit and the engine.” Nonetheless, relying on Abdelmalek, the Examiner alleges that “it’s well known to have a controller 117 in a hybrid engine to control the clutch 101a, 102a, in response to the speeds of an auxiliary unit (electric motor 102) and the main engine (vehicle speed) (note column 6, lines 10-60).” The Examiner then alleges that “[i]t would have been obvious ... to provide a control unit and speed sensor in Striebich as taught by Abdelmalek for the purpose of controlling the clutch to drive the vehicle more efficiently.” Applicant respectfully disagrees with the Examiner’s allegations.

As is apparent from the Examiner's reasons set forth in the final Office Action, the Examiner has completely ignored particularities of Striebich's teachings and thereby the features that teach away from modifying them in the manner suggested by the Examiner. For example, the Examiner alleges that "clutch control is well known in the internal combustion engine system, no matter what types of clutch/engine are being used." As explained in Applicant's response filed on June 30, 2006, it does matter. The clutch used in Striebich is precisely a type that does not require a separate clutch control.

To reiterate, Striebich uses a freewheel clutch to directly transmit rotational energy of the waste heat turbine unit 3 to the crankshaft 8 of the internal combustion engine 2. A freewheel clutch, as is well-known in the art, does not require a separate control mechanism to control its engagement because it automatically engages and disengages depending on its rotational speed. For example, a freewheel clutch engages with a driven shaft when its rotational speed exceeds a predetermined level and disengages when its rotational speed falls below a predetermined level. Thus, where a freewheel clutch is used, a separate control system is not needed to control engagement of the freewheel clutch. Consequently, one of ordinary skill in the art considering Striebich would not have any reason to employ a control system to control the engagement of the freewheel clutch of Striebich. To do so would not only be useless, but also highly unworkable.

For at least these reasons, independent claims 38 and 54, and their respective dependent claims, patentably distinguish from the alleged combination of Striebich and Abdelmalek. Thus, the 35 U.S.C. § 103(a) rejection based on Striebich and Abdelmalek is in error and should be withdrawn.

#### **Double Patenting Rejection**

A rejection under the doctrine of obviousness-type double patenting is appropriate only when a claim in an application is not patentably distinct (i.e., merely an obvious variation) from the subject matter claimed in a commonly owned patent. See M.P.E.P. § 804.

In this case, the double patenting rejection is improper because the claims in this application define a subject matter that is patentably distinct from the invention defined in claims of the above-mentioned patents. For example, the claims of Patent I define a miniaturized waste heat engine and

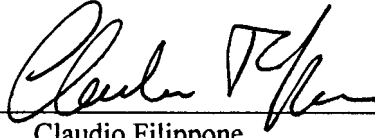
related method for recovering waste energy from a heat source and converting the waste energy into usable energy. Similarly, the claims of Patent II define a energy converting system and related method for converting heat energy from a heat source. Patentably distinct from the inventions defined in Patents I and II, the claims of the present application define an auxiliary power unit and related method for coupling to a torque bearing element of a primary power unit. Since the subject matter claimed in the present application is patentably distinct from the inventions defined in Patents I and II, this double patenting rejection is improper. For at least this reason, the rejection of claims 37-61 under the doctrine of obviousness-type double patenting is in error and should be withdrawn.

Applicant respectfully requests reconsideration of this application, withdrawal of all of the outstanding rejections, and allowance of all pending claims.

Respectfully submitted,

Dated: May 4, 2007

By: \_\_\_\_\_

  
Claudio Filippone